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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,978	09/30/2003	Leonel Saenz III	AUS920030795US1	4950

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EXAMINER	
DUONG, OANH L	

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/674,978	SAENZ, LEONEL	
	Examiner	Art Unit	
	Oanh Duong	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-10,12-17 and 19-21* is/are rejected.

7)☒ Claim(s) *4,11 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09/30/03; 01/12/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-21 are presented for examination.

Priority

2. No claim for priority has been made in this application.

3. The effective filing date for the subject matter defined in the pending claim in the application is 09/30/2003.

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 09/30/2003 and 01/12/2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

5. Examiner contends that the drawings submitted on 09/30/2003 are accepted for examination proceedings.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claim 15 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim is not limited to tangible embodiments. The claim recited "A computer program product on a computer readable medium... comprising" is nonstatutory. Since in view of Applicant's disclosure at page 15 lines 1-10, the computer readable medium also includes "transmission-type media such as digital and analog communication links, wired or wireless communications links using transmission forms, such as, for example, radio frequency and light wave transmissions". As such, the claim is not limited to statutory subject matter and is therefore nonstatutory.

To overcome this type of 101 rejection, examiner suggests applicants to amend the claim to include computer readable storage medium to store computer instructions (for example, the claim should be amended as "A computer program product comprising computer instructions embodied in a computer readable storage medium... comprising:" see MPEP 2106 section V. DETERMINE WHETHER THE CLAIMED INVENTION COMPLIES WITH 35 U.S.C. 101 under subsection 1. Nonstatutory subject matter.

Claim Objections

8. Claims 3-4, and 18-21 are objected to because of the following informalities:

Terminology used in claims 3-4 is inconsistent with claim 1. The term "user" in claims 3-4 should be used as "client" as in claim 1.

Regarding claims 18-21, "the method" in line 1 of each of the claims should be "the computer program product".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 1-3, and 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by **Nielsen**, U.S. Patent No. **6,968,379** B2.

Regarding claim 1, **Nielsen** teaches a method of transmitting information on a network (Fig. 2A and Fig. 3), comprising:

sending information to a plurality of clients across said network ("transmitting an HTML document and a JPG file to one client and a GIF file to another client", col. 6 lines

34-36), wherein each active client is allocated a corresponding initial amount of bandwidth (amount of bandwidth 320, 330, 340 and 350, Fig. 3) for transfer of information (i.e., the server 300 has a predetermined amount of bandwidth N 310 which is must divide 320, 330, 340, and 350 between multiple clients 360, 370, 380, and 390, Fig. 3 col. 4 lines 48-55), according to priority assign to said client (col. 4 lines 52-55 and col. 7 lines 47-64).

when a first active client is operating with a respective allocation and a portion of said first client's respective allocation is not used in a given time period ("when the client is not utilizing all of the allocated bandwidth", col. 5 lines 31-49), reducing said first client's respective allocation by the amount of said portion and redistributing said portion of bandwidth to other active clients ("the unused bandwidth is allocated to all other existing connections which might be able to use it", col. 1 lines 50-54), each of said other active clients having used all of a respective allocation of bandwidth (Fig. 7B: a client having an associated GIF file transmitted to will have an additional bandwidth added because all of allocation bandwidth associated with that client has been used, for example, unused bandwidth percent is 0%);

wherein said method seeks to utilize all portions of available bandwidth (Fig. 7B col.6 lines 32-58).

Regarding claim 2, **Nielsen** teaches the method of claim 1, wherein said portion of bandwidth will be redistributed according to a same system of priority as the initial

allocation of bandwidth (Fig. 7B col. 6 lines 32-58).

Regarding claim 3, **Nielsen** teaches the method of claim 1, wherein an initial amount of bandwidth allocated to each active user is recalculated each time a user changes status from active to inactive or inactive to active or a user's priority changes ("the Change priority event is triggered which then updates the AUT table and begins the bandwidth re-allocation process", col. 7 lines 46-49).

Regarding claim 5, **Nielsen** teaches the method of claim 1, wherein said network is the Internet (Internet 230, Fig. 2B col. 4 lines 42-47).

Regarding claim 6, **Nielsen** teaches the method of claim 1, wherein respective initial amounts of bandwidth are allocated as a calculated percentage of total bandwidth (Fig 3 col. 4 lines 48-55).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 8-10, 12-17, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nielsen** in view of **Pandya** et al. (hereafter, Pandya), U.S. Patent No. 6,671,724 B1.

Regarding claim 8, **Nielsen** teaches a server (server 220, Fig. 2A) for transmitting information on a network (network 200, Fig. 2A), said server comprising:

an input device (communication port 185, Fig. 1B) for receiving requests on said network from a plurality of active users (command(s) is/are received by server, col. 5 lines 11-23);

an output device (communication port 185, Fig. 1B) for providing information through said network to said plurality of active users ("transmitting an HTML document and a JPG file to one client and a GIF file to another client", col. 6 lines 32-58);

a processor connected to said input device and to said output device to process requests and provide information (CPU 155 connected to communication ports 185 via bus 150 for processing request and providing information, Fig. 1B); and

an allocation program (bandwidth allocator) executed by said processor, said allocation program being connected to provide allocations of bandwidth for sending information successively to ones of said plurality of active users (bandwidth allocation from network server to several clients, col. 4 lines 48-55), said allocation program comprising:

first instructions for allocating a first portion of bandwidth to one of said active users (25% of server's predetermined amount of bandwidth N 310 is

allocated to client 1, Fig. 3 col. 4 lines 48-55 and col. 7 lines 47-63) and for allocating a second portion of bandwidth to one of said active users (50% of server's predetermined amount of bandwidth N 310 is allocated to client 2, Fig. 3 col. 4 lines 48-55 and col. 7 lines 47-63); and

second instructions for determining a first amount of bandwidth of a first user's allocation that has not been used ("when the client is not utilizing all of the allocated bandwidth", col. 5 lines 31-49), reducing said first user's allocation by said first amount, and redistributing said first amount of bandwidth to other active clients ("the unused bandwidth is allocated to all other existing connections which might be able to use it", col. 1 lines 50-54), each of said other active clients having used all of a respective allocation of bandwidth (Fig. 7B: a client having an associated GIF file transmitted to will have an additional bandwidth added because all of allocation bandwidth associated with that client has been used, for example, unused bandwidth percent is 0%).

Nielsen does not explicitly teach allocate bandwidth to multiple groups of users having priorities.

Pandya, in the same of endeavor, teaches allocate bandwidth to multiple groups of users having priorities (col. 15 line 46-col. 16 lines 20, and col. 21 lines 6-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of **Nielsen** to allocate bandwidth to groups of users according to their associated priorities as in **Pandya**. On would be motivated to do to allow available bandwidth to be efficiently utilized among different groups of users with different priority level (**Pandya**, col. 15 lines 64-65).

Regarding claim 9, **Nielsen** teaches the server of claim 8, wherein said second instructions redistribute said first amount of bandwidth according to a same system of priority as said first instructions (Fig. 7B col. 6 lines 32-58).

Regarding claim 10, **Nielsen** teaches the server of claim 8, wherein said first instruction are performed each time one of the following events occurs: a new user requires an allocation, an existing user no longer requires an allocation, or a user's priority is changed (col. 7 lines 46-49).

Regarding claim 12, **Nielsen** teaches the method of claim 8, where said network is the Internet (Internet 230, Fig. 2B col. 4 lines 42-47).

Regarding claim 13, **Nielsen** teaches the method of claim 8, wherein respective initial amounts of bandwidth are allocated as a calculated percentage of total bandwidth (Fig 3 col. 4 lines 48-55).

Regarding claim 14, **Nielsen** taught (Fig. 8) that each level of priority has a predetermined portion of bandwidth allocated to it. However, **Nielsen** did not expressly teach a correspondence set forth in claim 14, priority three receives an allocation of one part, priority two receives an allocation of two parts, and priority one receives an allocation of six parts. **Nielsen** teaches that priority A receives an allocation of four

parts, priority B receives an allocation of 2 parts, and priority C receives an allocation of one part (Figs 8A-8B). It would have been obvious to one of ordinary skill in the art at the time of the invention was made that the relationship of the priority would be modified to reflect the relative importance of each operation or user which would alter the corresponding initial bandwidth allocation (Nielsen, col. 4 lines 52-54).

Regarding claim 15, **Nielsen** teaches a computer program product on a computer readable medium, said computer program product comprising:

first instructions for allocating a first percentage of bandwidth to one of said active users (25% of server's predetermined amount of bandwidth N 310 is allocated to client 1, Fig. 3 col. 4 lines 48-55 and col. 7 lines 47-63) and for allocating a second percentage of bandwidth to one of said active users50% of server's predetermined amount of bandwidth N 310 is allocated to client 2, Fig. 3 col. 4 lines 48-55 and col. 7 lines 47-63); and

second instructions for determining a first amount of bandwidth of a first user's allocation that has not been used ("when the client is not utilizing all of the allocated bandwidth", col. 5 lines 31-49), reducing said first user's allocation by said first amount, and distributing said first amount of bandwidth to other active clients ("the unused bandwidth is allocated to all other existing connections which might be able to use it", col. 1 lines 50-54), each of said other active clients having used all of a respective allocation of bandwidth (Fig. 7B: a client having an associated GIF file transmitted to will

have an additional bandwidth added because all of allocation bandwidth associated with that client has been used, for example, unused bandwidth percent is 0%).

Nielsen does not explicitly teach allocate bandwidth to multiple groups of users having priorities.

Pandya, in the same of endeavor, teaches allocate bandwidth to multiple groups of users having priorities (col. 15 line 46-col. 16 lines 20, and col. 21 lines 6-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of **Nielsen** to allocate bandwidth to groups of users according to their associated priorities as in **Pandya**. On would be motivated to do to allow available bandwidth to be efficiently utilized among different groups of users with different priority level (Pandya, col. 15 lines 64-65).

Regarding claim 16, **Nielsen** teaches the computer program product of claim 15, wherein said second instructions redistribute said first amount of bandwidth according to a same system of priority as in said first instructions (Fig. 7B col. 6 lines 32-58).

Regarding claim 17, **Nielsen** teaches the computer program product of claim 15, wherein said first instruction are performed each time one of the following events occurs: a new user requires an allocation, an existing user no longer requires an allocation, or a user's priority is changed (col. 7 lines 46-49).

Regarding claim 19, **Nielsen** teaches the method of claim 15, where said network is the Internet (Internet 230, Fig. 2B col. 4 lines 42-47).

Regarding claim 20, **Nielsen** teaches the method of claim 15, wherein said first instructions allocate respective initial amounts of bandwidth as a calculated percentage of total bandwidth (Fig 3 col. 4 lines 48-55).

Regarding claim 21, this claim recites substantially the same as claim 14, discussed above, the same rationale of rejection is applicable.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as obvious over **Nielsen**.

Regarding claim 7, **Nielsen** taught (Figs. 8A-8B) that each level of priority has a predetermined portion of bandwidth allocated to it. However, **Nielsen** did not expressly

teach a correspondence set forth in claim 7, priority three receives an allocation of one part, priority two receives an allocation of two parts, and priority one receives an allocation of six parts. **Nielsen** teaches that priority A receives an allocation of four parts, priority B receives an allocation of 2 parts, and priority C receives an allocation of one part. It would have been obvious to one of ordinary skill in the art at the time of the invention was made that the relationship of the priority would be modified to reflect the relative importance of each operation or user which would alter the corresponding initial bandwidth allocation (Nielsen, col. 4 lines 52-54).

Allowable Subject Matter

14. Claims 4, 11 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

System and method for dynamically reallocation the unused bandwidth of one user to another user is firmly documented by cited prior art; however, none of prior art teaches or suggests taking a small amount of bandwidth away from clients who started a period with allocated bandwidth greater than their initial allocated bandwidth, and redistribute said small amount of bandwidth to clients who started the period with allocated bandwidth less than their initial allocated bandwidth and who used all of their allocated bandwidth (as defined in the specification of the instant application at page 13 lines 4-30, Fig. 4).

Conclusion

15. The following prior art is made of record and not relied upon that is considered pertinent to applicant's disclosure:

a) Gandhi et al. (U.S. Pub. No. 2005/0120102 A1) discloses a first customer's unused resources are assigned to a second customer.

b) McKinnon, III et al (U.S. Pub No. 2002/0118699 A1) discloses step of allocating to users network access for a future time interval, and then reallocating network access to the users during a succeeding time interval.

c) Mekkitikul et al. (U.S. Patent No. 6,947,998 B2) discloses determination of the amount of allocated bandwidth can be accomplished in real time.

d) Zeitak et al. (U.S. Pub. No. 2003/0200317 A1) discloses dynamically allocate portions of the common bandwidth resources among network elements.

e) Khurama et al. (U.S. Pub. No. 2004/0028054 A1) discloses bandwidth allocated between traffic classes of network path is dynamically reallocated.

f) Sankaranarayan et al. (U.S. Patent No. 6,799,208 B1) discloses dynamically allocates and de-allocates resources.

g) Perlmutter et al. (U.S. Pub. No. 2002/0075901 A1) discloses server conveniently manage bandwidth for the application groups.

h) Abu-amara et al. (U.S. Patent No. 5,914,945) discloses partition the bandwidth within the network among various service groups.

i) Weerakoon et al. (U.S. Pub. No. 2003/0125034 A1) discloses a pre-emptive bandwidth allocation by dynamically partitioning the total available bandwidth to

allow users with high priority to access greater amounts of bandwidth than users with low priority when network is overloaded.

j) Hou et al., (U.S. Patent 6,324,184 B1) discloses bandwidth is dynamically allocated.

k) Lee at al., "A Bandwidth Reallocation Scheme for Ethernet-Based Real-Time communication", Second International Workshop on Real-Time Computing Systems and Applications, Oct. 1995, page(s) 28-33.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh Duong whose telephone number is (571) 272-3983. The examiner can normally be reached on Monday- Friday, 9:30 PM - 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Oanh Duong
February 16, 2006